

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-28. (cancelled)

29. (currently amended) A method for detecting the presence of two or more target compounds in a substance which may contain said target compounds comprising:

- a) exposing a substance which may contain said target compounds to capture molecules, wherein each capture molecule binds specifically to a corresponding target compound, to form a capture molecule:target compound complex;
- b) removing the remainder of said substance from said capture molecule:target compound complexes;
- c) adding to said capture molecule:target compound complexes reporter molecules; wherein each reporter molecule binds specifically to a corresponding target compound to form a capture molecule:target compound:reporter molecule complex; and
- d) detecting said target compounds by detection of said capture molecule:target compound:reporter molecule complexes, wherein said detecting comprises detecting by flow cytometry;

wherein said capture molecules, said reporter molecules or both are a nucleic acid ligand to said target compounds.

30. (previously added) The method of claim 29 wherein said reporter molecule comprises a detection system.

31. (previously added) The method of claim 30 wherein said detection system is a nucleic acid ligand labeled with a fluorophore.

32. (previously added) The method of claim 31 wherein said fluorophore is selected from fluorescein and Alexa.

33. (previously added) The method of claim 29 wherein said capture molecule is immobilized on a solid support.

34. (previously added) The method of claim 33 wherein said solid support is selected from a microsphere particle and a membrane.

35. (canceled)

36. (previously added) The method of claim 29 wherein said target compounds are proteins.

37. (previously added) The method of claim 36 wherein one or more of said proteins are selected from thrombin and L-Selectin.

38. (previously added) The method of claim 29 wherein said capture molecules and reporter molecules are nucleic acid ligands.

39. (previously added) The method of claim 29 wherein said capture molecules are nucleic acid ligands and said reporter molecules are proteins.

40. (previously added) The method of claim 29 wherein said capture molecule and reporter molecule bind to separate non-overlapping sites on said target compound.

41. (previously added) The method of claim 29 wherein said reporter molecule binds to a site on said capture molecule:target compound complex.

42. (previously added) The method of claim 29 wherein said substance is a biological fluid.

43. (previously added) The method of claim 42 wherein said biological fluid is selected from plasma and urine.

44. (previously added) The method of claim 29 wherein said detection is achieved by flow cytometry.

45. (currently amended) A method for detecting the presence of two or more target compounds in a substance which may contain said target compounds comprising:

- a) identifying a nucleic acid ligand for each of said target compounds from a candidate mixture of nucleic acids, by the method comprising:
 - i) contacting the candidate mixture with each of said target compounds, wherein nucleic acids having an increased affinity to said targets relative to the candidate mixture may be partitioned from the remainder of the candidate mixture;
 - ii) partitioning the increased affinity nucleic acids from the remainder of the candidate mixture;
 - iii) amplifying the increased affinity nucleic acids to yield a ligand-enriched mixture of nucleic acids; and
 - iv) identifying said nucleic acid ligand;
 - b) exposing a substance which may contain said target compounds to capture molecules, wherein each capture molecule binds specifically to a corresponding target compound, to form a capture molecule:target compound complex;
 - c) removing the remainder of said substance from said capture molecule:target compound complexes;
 - d) adding to said capture molecule:target molecule complexes reporter molecules; wherein each reporter molecule binds specifically to a corresponding target compound to form a capture molecule:target compound:reporter molecule complexes; and
 - e) detecting said target compounds by detection of said capture molecule:target compound:reporter molecule complexes, wherein said detecting comprises detecting by flow cytometry;
- wherein said capture molecules, said reporter molecules or both are nucleic acid ligands to said target compounds identified by the method of step (a).

46. (previously added) The method of claim 45 wherein said reporter molecules comprise a detection system.

47. (previously added) The method of claim 46 wherein said detection system is a nucleic acid ligand labeled with a fluorophore.

48. (previously added) The method of claim 47 wherein said fluorophore is selected from fluorescein and Alexa.

49. (previously added) The method of claim 45 wherein said capture molecule is immobilized on a solid support.

50. (previously added) The method of claim 49 wherein wherein said solid support is selected from a microsphere particle and a membrane.

51. (cancelled)

52. (previously added) The method of claim 45 wherein said target compounds are proteins.

53. (previously added) The method of claim 52 wherein one or more of said proteins is selected from thrombin and L-Selectin.

54. (previously added) The method of claim 45 wherein said capture molecules and reporter molecules are nucleic acid ligands.

55. (previously added) The method of claim 45 wherein said capture molecules are nucleic acid ligands and said reporter molecules are proteins.

56. (previously added) The method of claim 45 wherein said capture molecules and reporter molecules bind to separate non-overlapping sites on said target compounds.

57. (previously added) The method of claim 45 wherein said reporter molecules bind to a site on said capture molecule:target complexes.

58. (previously added) The method of claim 45 wherein said substance is a biological fluid.

59. (previously added) The method of claim 58 wherein said biological fluid is selected from plasma and urine.

60. (previously added) The method of claim 45 wherein said detection is achieved by flow cytometry.